BUILDING 707 "J'' MODULE GLOVE BOX REMOVAL CHARACTERIZATION PLAN

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

Prepared by

Rocky Mountain Remediation Services

Rev. 3
March 18, 1996

Building 707 "J " Module Glove-Box Removal
Characterization Plan
Revision 3
March 18,1996

This characterization plan has been reviewed and approved by:

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Ricky Carr, Industrial Hygiene Manager — Date: 3/18/96

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This characterization plan was prepared by:

Mary T. Aycock, Environmental Engineer, SEG, CO — Date: 3/18/96

Building 707 "J" Module Glove Box Removal Characterization Plan

1. Introduction:

Preliminary characterization is being performed for this project to establish a baseline of information concerning the physical, chemical and radiological condition of the facility. This can include taking samples or conducting inspections designed to compliment the information from the screening characterization.

The scope of the project consists of the removal of four (4) large glove-boxes and one (1) small "B" box in the "J" Module of Bldg. 707. All associated utilities are also to be removed. Radiologically contaminated boxes include J 20, J 40 and J 50. They will be removed to building 776 for volume reduction. J 30 and J 40A are to be moved to "D" module in 707 for future use. This project will result in the generation of hazardous, mixed, LLW, and TRU wastes and will require that a pre-job assessment be conducted to identify hazardous and radiological contaminants that may be present within the module during the equipment removal process.

2. Purpose and Scope:

The purpose of the proposed sampling activities is (1) to quantify and qualify the physical and chemical characteristics of radiological and hazardous material contamination and the extent of contaminant distribution; (2) to quantify and qualify environmental parameters that effect potential human exposure from existing and residual radiological or hazardous material contamination; (3) to support evaluation of detailed planning of a preferred approach for decontamination, equipment removal and waste disposal; (4) to support required project plan considerations of dose assessments and ALARA analyses to support selection of cleanup criteria and approach.

3. Background Radiation Surveys and Activity Levels:

The radiological survey data collected during the characterization activities will consist of two types (1) field measurements using portable instruments and (2) sample analyses using fixed laboratory equipment or systems.

Contamination surveys have been conducted in accordance with the Radiological Operating Instructions (ROIs) Manual for the 707 Module "J". The results of selected contamination surveys are included as Attachment A. Additional Surveys will be conducted by Radiological Operations Personnel and Nuclear Safeguards prior to the start of construction and the results will be included in the final characterization report. Results from media and swipe samples collected will also be included in the final report.

4. Facility Investigation Reports and Documents:

The following documents were reviewed prior to the start of work and serve as references for preliminary characterization of the Module "J" Glove Boxes:

Waste Stream and Residue Description and Characterization, Module J; 707-V5.0, Process number 707-3.

IWCP titled "Remove Gloveboxes from J-Module, Bldg, 707; Work Control Number: 952020PT Rev. No.0.

Standard Work Package: "Deactivate Gloveboxes and Portions of the Chainveyors in Module "D", Building 707"; Work Control Number: TP077620.

5. Facility Drawings:

Facility drawings that are related to this project have been included in the work control package no. 952020PT. Two additional work packages are being developed to perform the removal and size reduction of the glove boxes.

6. Facility Walk-Down:

A Facility Walk-Down was conducted on 2/21/96 to identify areas where samples would be taken. Health and Safety personnel, construction management, the field sampling supervisor and the B707 Crafts supervisor participated in the walk-down. Areas requiring sampling were identified during the walk-through.

7. Sampling and Analysis Plan:

Data collected during the characterization activities will consist of two types (1) field measurements using portable instruments or test kits and (2) sample analyses of media using fixed laboratory equipment or systems. Radiological surveys will be performed by trained RMRS Radiological Control Technicians (RCTs) using field instrumentation in accordance with the ROI Manual. Lead Test kits will be used as a preliminary screening test to verify the presence of lead.

The following table lists the locations and the types of samples that will be required for characterization purposes. A trained sampling team was selected to perform the sampling activities required for characterization purposes. Analysis for characterization purposes will be performed using Environmental Protection Agency (EPA) approved procedures using laboratory facilities located on-site. Data Quality Objectives (DQOs) are established for the analytical methods referenced and are available through the on-site Kaiser-Hill APO office in B-881.

Sample Type/One(1) Each	Analysis/EPA Method
Glove Box J 20 (Paint)	Total Metals EPA 6010 (14-Day) Rad Scan (Alpha/Beta) Isotopics (Pu 239, 30-day)
Glove Box J 20 (Adhesive)	Asbestos/non-friable (no samples-process knowledge)
Glove Box J 30 (Paint)	Total Metals EPA 6010 (14-Day) Rad Scan (Alpha/Beta) Isotopics (Pu 239, 30-day)
Glove Box J 40 (Paint)	Total Metals EPA 6010 (3-Day) Rad Scan (Alpha/Beta) Isotopics (Pu 239, 30-day)
Glove Box J 40 (Adhesive)	Asbestos/non-friable (no samples-process knowledge)

Glove Box J 50 (Paint)	Total Metals EPA 6010 (3-Day) Rad Scan (Alpha/Beta) Isotopics (Pu 239, 30-day)
Glove Box J 50 (Adhesive)	Asbestos/non-friable (no samples-process knowledge)
"J" Module Floor Paint	Total Metals EPA 6010 (14-Day) Rad Scan (Alpha/Beta)
Associated Utility Boxes	Dry- No PCBs/ Lead Field Test
Main Glovebox Line	Total Metals EPA 6010 (14-Day) Rad Scan (Alpha/Beta)

8. Documentation

During characterization activities, several direct, indirect and sample media samples will be measured, obtained and analyzed for radiological and hazardous material contaminants. The results will be used to determine the extent and magnitude of the contaminants and the basis for estimating waste quantities and decontamination options. Sample collection, analysis, and the associated documentation will follow standard written procedures and meet the recommendations and requirements of applicable regulatory agencies. A "chain of custody" sample tracking form will be used for each sample collected to account for the sample from collection to the point of analysis. Samples will be collected and documented in accordance with Laboratory Procedure No. L-6294-A "Sampling Within an RBA/CA".

Results of all characterization activities will be documented in applicable field notebooks and summarized in a brief characterization report. This report will be distributed to appropriate project personnel to support decisions made for waste management, industrial hygiene, decontamination and other activities which may involve hazardous and radiological contaminants. *Radiation protection for the sampling event and the sampling team will be addressed under a Radiological Work Permit (RWP). Additional personal protective equipment for the sampling activity will be as specified by the IH manager.*

9. References

DOE/EM-0142P Decommissioning Handbook, March 1994, U.S. DOE Office of Environmental Restoration

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA SW-846, 1986, Third Edition.

Waste Stream and Residue Description and Characterization, Module J; 707-V5.0, Process number 707-3.

IWCP titled "Remove Gloveboxes from J-Module, Bldg, 707; Work Control Number: 952020PT Rev. No.0.

Standard Work Package: "Deactivate Gloveboxes and Portions of the Chainveyors in Module "D", Building 707"; Work Control Number: TP077620.

ATTACHMENT A

CONTAMINATION SURVEYS

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

CONTAMINATION SURVEY ALPHA

INSTRUMENT DATA

MFG. EBERLINE	MFG.	MFG.
MODEL SAC 4	MODEL	MODEL
SERIAL # 1072	SERIAL #	SERIAL #
CAL. DATE 10-95	CAL. DATE	CAL. DATE
CAL. DUE 4-96	CAL. DUE.	CAL. DUE.
BKG 0.5	BKG	BKG
MFG.	MFG.	MFG.
MODEL	MODEL	MODEL
SERIAL #	SERIAL #	SERIAL #
CAL. DATE	CAL. DATE	CAL. DATE
CAL. DUE.	CAL. DUE.	CAL. DUE.
BKG	BKG	BKG

707
BASELINE-MODULE J

AREA STATUS:

- X WITHIN LIMITS
- ____ LIMITS EXCEEDED
- ____ POSTED
- ____ DEPOSTED
- ____ SURVEY COPY POSTED

COMMENTS

CONTAMINATION RESULTS

DPM/100cm2 REMOVABLE (SWIPE)

1. <18	26 <18	51	76
2. <18	27 <18	52	77
3. <18	28 <18	53	78
4. <18	29 <18	54	79
5. <18	30 <18	55	80
6. <18	31 <18	56	81
7. <18	32 <18	57	82
8. <18	33 <18	58	83
9. <18	34 <18	59	84
10 <18	35 <18	60	85
11 <18	36	61	86
12 <18	37	62	87
13 <18	38	63	88
14 <18	39	64	89
15 <18	40	65	90
16 <18	41	66	91
17 <18	42	67	92
18 <18	43	68	93
19 <18	44	69	94
20 <18	45	70	95
21 <18	46	71	96
22 <18	47	72	97
23 42	48	73	98
24 36	49	74	99
25 156	50	75	100

DATE: 01-24-96

TIME: 19 00

RWP # 95-707-1002

RCT Brant

EMP. # [redacted]

RCT _____

EMP. # _____

DATE REVIEWED:

1/25/96

R.O. FOREMAN / EMPLOYEE#

B. Austin / [redacted]

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

CONTAMINATION SURVEY
ALPHA

707
OVERHEAD MODULE J

INSTRUMENT DATA

MFG. Ludlum	MFG.	MFG.
MODEL 2-1A	MODEL	MODEL
SERIAL # 76014	SERIAL #	SERIAL #
CAL. DATE 9-28-95	CAL. DATE	CAL. DATE
CAL. DUE. 9-96	CAL. DUE.	CAL. DUE.
BKG <500 dpm	BKG	BKG
MFG.	MFG.	MFG.
MODEL	MODEL	MODEL
SERIAL #	SERIAL #	SERIAL #
CAL. DATE	CAL. DATE	CAL. DATE
CAL. DUE.	CAL. DUE.	CAL. DUE.
BKG	BKG	BKG

AREA STATUS:

- ✓ WITHIN LIMITS
- _____ LIMITS EXCEEDED
- _____ POSTED
- _____ DEPOSTED
- _____ SURVEY COPY POSTED

COMMENTS

CONTAMINATION RESULTS

(WIPE DPM)

1. <500	26. <500	51.	76.
2. <500	27. <500	52.	77.
3. <500	28. <500	53.	78.
4. <500	29. <500	54.	79.
5. <500	30. <500	55.	80.
6. <500	31. <500	56.	81.
7. <500	32. <500	57.	82.
8. <500	33. <500	58.	83.
9. <500	34. <500	59.	84.
10. <500	35. <500	60.	85.
11. <500	36.	61.	86.
12. <500	37.	62.	87.
13. <500	38.	63.	88.
14. <500	39.	64.	89.
15. <500	40.	65.	90.
16. <500	41.	66.	91.
17. <500	42.	67.	92.
18. <500	43.	68.	93.
19. <500	44.	69.	94.
20. <500	45.	70.	95.
21. <500	46.	71.	96.
22. <500	47.	72.	97.
23. <500	48.	73.	98.
24. <500	49.	74.	99.
25. <500	50.	75.	100.

DATE: 10-30-95

TIME: 2200

RWP # 95-707-A02

RCT Michael A White

EMP. # [redacted]

RCT _____

EMP. # _____

DATE REVIEWED:
10/31/95

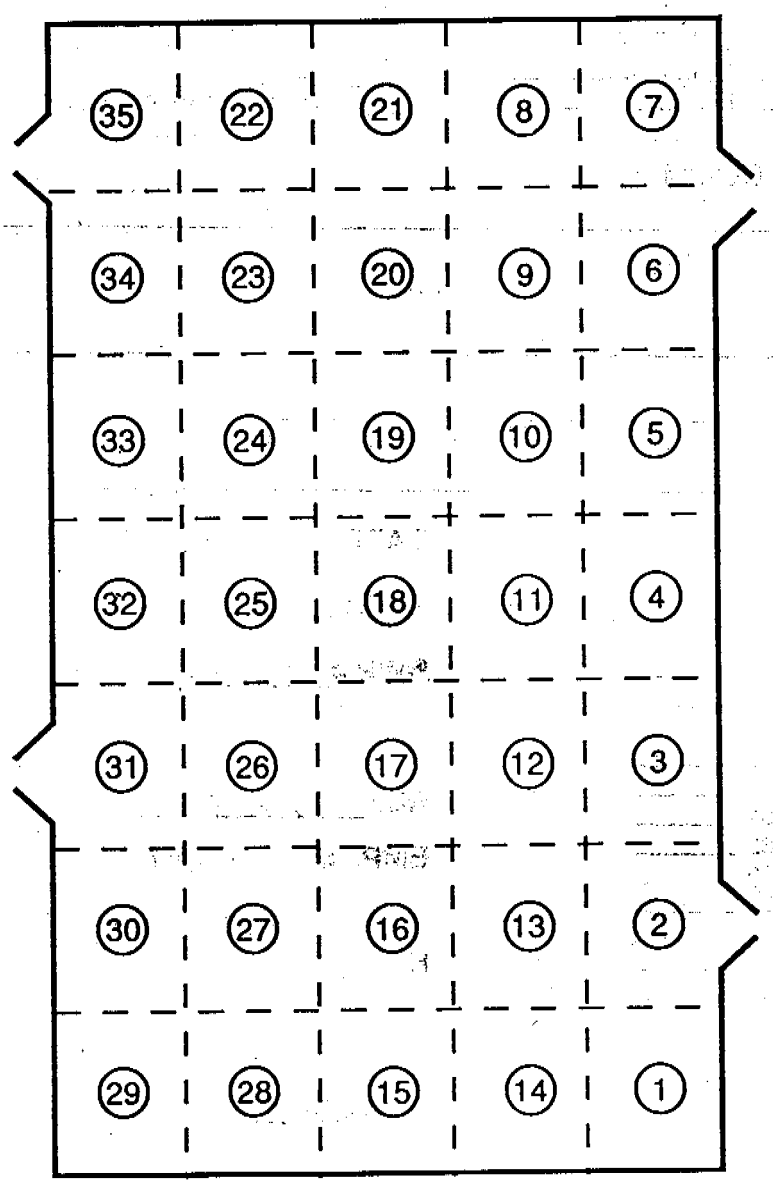
R.O. FOREMAN / EMPLOYEE#
[redacted]

[redacted]

RADIOLOGICAL OPERATIONS

MODULE J - BASELINE

Drawing Showing Survey Points



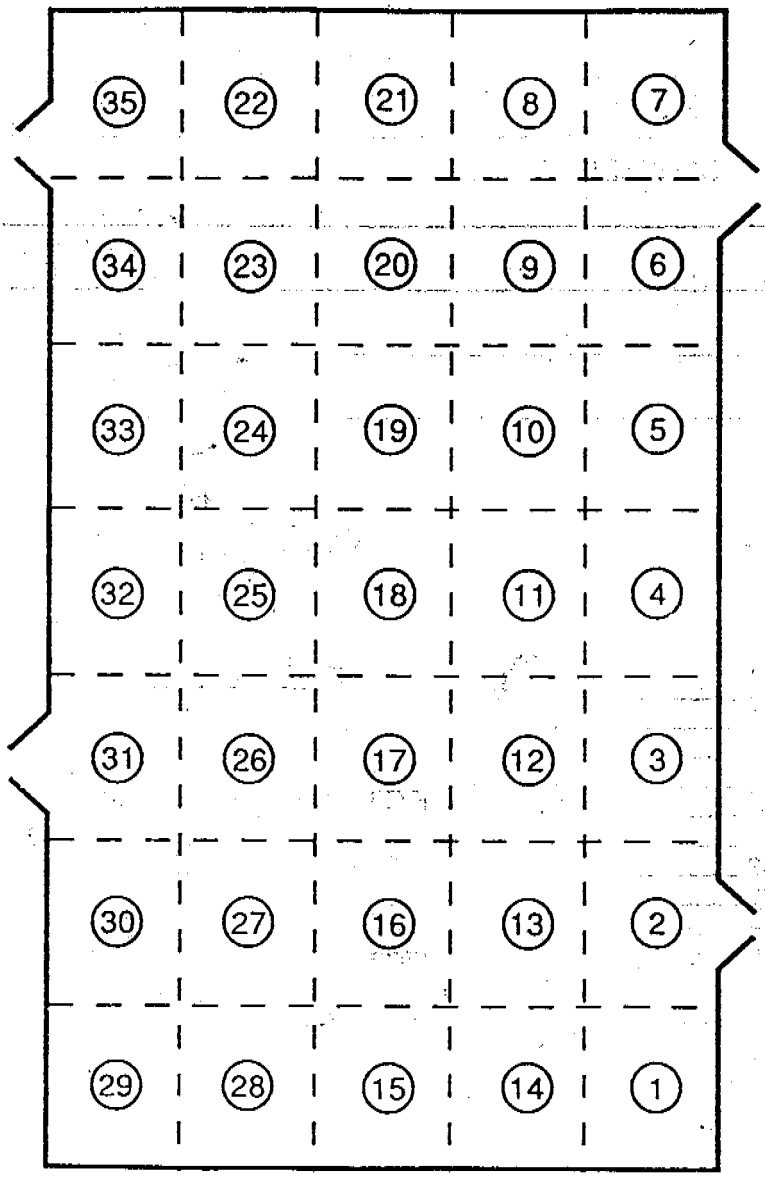
1 REPRESENTATIVE SWIPE IN APPROX. 1 SQUARE METER PER 10 SQUARE METER AREA.

35 - Total Survey Points

RADIOLOGICAL OPERATIONS

MODULE J - OVERHEAD

Drawing Showing Survey Points



35 – Total Survey Points